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Increase in Unprotected Anogenital Intercourse among Homosexual Men

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ABSTRACT

Results are presented from two sources, data of which indicate an increase in high-risk sexual behaviors for human immunodeficiency virus infection among homosexual men. The number of cases of gonorrhea among homosexual and bisexual visitors to municipal sexually transmitted disease clinics in Amsterdam, The Netherlands, is increasing. An increase was also observed in unprotected anogenital intercourse among homosexual participants in the Amsterdam cohort. These findings indicate that a rebound in the behavior change process among homosexual men is occurring. Furthermore, longitudinal behavioral data show that lapse and relapse into unsafe sex are prevalent in the Amsterdam cohort. (*Am J Public Health.* 1993;83: 1451–1453)

Introduction

As a result of the influence of the acquired immunodeficiency syndrome (AIDS), substantial changes in sexual behaviors have been reported, mainly before 1988, among homosexual men.[1] Two years ago, we reported indications for a possible drawback in the behavior change process. After several years of decrease, the number of cases of (anorectal) gonorrhea among homosexual and bisexual visitors to sexually transmitted disease clinics in Amsterdam was found to rise.[2] In addition, in 1990 an unexpected increase was noted in the incidence of human immunodeficiency virus (HIV) infection among generally well-informed participants in the Amsterdam Cohort Study.[2,3] Furthermore, several behavioral studies in the United States have documented relapse among homosexual men.[4–6]

This study presents additional evidence documenting an increase in risk behaviors among homosexual men. Findings are presented from two sources. First, the annual number of cases of gonorrhea through 1991 among homosexual and bisexual men, as diagnosed at sexually transmitted disease clinics in Amsterdam, is reported both in absolute numbers and relative to the number of consultations. Second, data are presented regarding the prevalence of unprotected anogenital intercourse among homosexual men participating in the Amsterdam Cohort Study between 1984 and 1991. Longitudinal behavioral data of participants in the Amsterdam cohort are presented to determine whether relapse is occurring.

Methods

Sexually Transmitted Disease Clinics

Since 1981, gender, year of birth, and sexual preference of individuals visiting the sexually transmitted disease clinics of the Amsterdam Municipal Health Service for a new consultation have been registered together with sexually transmitted disease diagnosis. For this study, data were collected regarding the total number of consultations in homosexual and bisexual men, the number of cases of anorectal or urethral gonorrhea in this group, and the ages of homosexual and bisexual male clients.

Amsterdam Cohort Study

Participants visit the Municipal Health Service in Amsterdam every 3 (men who are positive for HIV antibodies) or 6 months (men who are negative for HIV antibodies). From 1984 through 1991, participants completed 12 semiannual questionnaires concerning their sexual behavior in the previous 6 months. In all cycles, the data obtained on sexual behavior were combined into a dichotomous behavioral index for insertive and receptive anal intercourse, separately as well as combined; this index indicated the occurrence of no (anogenital) intercourse or protected anogenital intercourse (no risk) vs unprotected anogenital intercourse (risk). Sexual behavior was assessed for all men with valid data in the interval concerned. Participants negative for HIV an-

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TABLE 1—Number of Cases of Anorectal and Urethral Gonorrhea among Homosexual and Bisexual Men Diagnosed at the Municipal Sexually Transmitted Disease Clinics, Amsterdam, The Netherlands: 1986 through 1991

	1986	1987	1988	1989	1990	1991
Number of consultations[a]	2983	2055	1636	1668	1622	1666
Anorectal gonorrhea, no. (%[b])	113 (3.8)	50 (2.4)	35 (2.2)	44 (2.6)	89 (5.5)	138 (8.3)
Urethral gonorrhea, no. (%[b])	174 (5.8)	95 (4.6)	73 (4.5)	101 (6.1)	157 (9.7)	163 (9.8)
Respondents between 25 and 30 years of age, %[c]	27.2	29.1	24.5	30.6	36.0	38.6
Respondents younger than 25 years of age, %[c]	25.1	25.3	24.5	17.9	20.3	20.9

[a]Among homosexual and bisexual male clients.
[b]Percentage of consultations.
[c]Among homosexual and bisexual men diagnosed with anorectal and/or urethral gonorrhea.

TABLE 2—Percentage of Participants with Unprotected Anogenital Intercourse in a Cohort of Homosexual Men, Amsterdam, The Netherlands

	Positive for HIV Antibodies		Negative for HIV Antibodies		Entire Group	
Data Wave	%	No.	%	No.	%	No.
1984/2	84.2	234	54.7	507	86.4	741
1985/1	65.4	214	38.2	571	69.7	785
1985/2	55.3	217	31.4	571	61.4	788
1986/1	46.5	202	27.5	531	52.7	733
1986/2	30.9	207	24.7	555	42.5	762
1987/1	20.2	183	20.8	525	36.0	708
1987/2	21.9	196	17.7	495	33.3	691
1988/1	21.6	166	18.1	480	32.2	646
1988/2[a]	...	...	...	...	...	...
1989/1[a]	...	...	...	...	...	...
1989/2	26.0	173	19.9	453	34.2	626
1990/1[a]	...	...	...	...	...	...
1990/2	18.0	216	22.7	455	34.1	671
1991/1	15.8	233	17.7	436	29.1	669
1991/2[b]	26.4	201	25.4	441	40.7	642

Note. For participants positive for HIV antibodies, the percentage practicing unprotected insertive anogenital intercourse is depicted. For participants negative for HIV antibodies, the percentage that had unprotected receptive anogenital intercourse is shown. For the entire group, the prevalence of unprotected insertive and/or receptive anogenital intercourse is presented.
[a]No data available.
[b]For men who were negative for HIV antibodies and for men who were seropositive, as well as for the entire group, a significant increase in unprotected anogenital intercourse was found relative to the previous interval; McNemar test, $P < .01$.

tibodies completed the questionnaire before they were informed about their most recent HIV antibody status. In the period from 1984 through 1991, 1103 predominantly White, well-educated homosexual men participated in the study. At entry, 340 participants (30.8%) were positive for HIV antibodies and 763 men (69.2%) were seronegative. At wave 12, participants' mean age was 41.2 years (SD = 7.7, range = 21 to 64).

For longitudinal analyses, the semiannual data waves were reduced to eight 1-year intervals. To ensure identical measurement periods, only one wave was used per interval. Data waves 1985/1, 1986/1, 1987/1, and 1991/1 were therefore not included. Seven categories of behavioral patterns were observed: consistent no risk, change to no risk, lapse, change and lapse, relapse, change and relapse, and consistent risk. (The terms used as category labels are only meant to describe observed behavioral patterns and do not contain any implicit assumptions about the factors that possibly underlie the observed behavioral variations. Use of the terms "lapse" and "relapse" also does not imply that sexual behaviors among homosexual men can be equated to addictive behaviors. Change was defined as at least one episode of safe sex following one or more episodes of unsafe sex. Lapse was defined as at least one episode of safe sex followed by one or more periods of unsafe sex and at least one episode of safe sex. Relapse was operationalized as one or more episodes of safe sex followed by at least one episode of unsafe sex, without returning to safe sex. Detailed information about the construction of the longitudinal behavioral categories is available on request.)

Longitudinal behavior patterns could be assessed for 310 (28.1%) participants with complete behavioral data. Comparisons involving *available* social–demographic and behavioral data of men who entered the study later (n = 361; 32.7%), were lost to follow up (n = 354; 32.1%), or had insufficient data (n = 78; 7.1%) showed no significant differences except higher age among men included in the longitudinal panel.

Results

Cases of Gonorrhea

After several years of decline, the number and percentage of diagnosed cases of gonorrhea among homosexual and bisexual clients of sexually transmitted disease clinics in Amsterdam started to increase again in 1989. This rise continued in 1990 and 1991 (Table 1). In contrast, the total number of cases of gonorrhea diagnosed in heterosexual men continued to decline (data not shown). The observed increase was found with respect to gonorrhea located in the rectum as well as in the urethra. This increase in high-risk sexual behaviors, as reflected in the diagnosed number of cases of gonorrhea, was more prominent among younger homosexual men, specifically among men between 25 and 30 years of age. The mean age of homosexual and bisexual men diagnosed with gonorrhea decreased significantly from 30.9 in 1988 to 29.2 in 1991.

Sexual Behaviors

Analysis of self-reported behavioral data of participants in the Amsterdam cohort (Table 2) revealed that, after a decline in the percentage of men practicing unprotected receptive and/or insertive anogenital intercourse from 86.4% in the second half of 1984 to 29.1% in the first half of 1991, a significant increase to 40.7% occurred in the second half of 1991 (McNemar test, $\chi^2 = 29.45$, $P = .0000$). For both men who were HIV negative (McNemar test, $\chi^2 = 8.89$, $P = .0029$) and men who were HIV positive (McNemar test, $\chi^2 = 9.03$, $P = .0027$), an increase was found in the percentage practicing un-

protected anogenital intercourse relative to the first 6 months of 1991.

In the second half of 1990, as well as in the second half of 1991, separate questions regarding sexual intercourse with steady and casual partners were included. No significant increase was found in the proportion of men reporting unprotected anogenital intercourse with steady partners (24.6% in 1990 and 27.7% in 1991). The observed increase in unprotected anogenital intercourse was mainly found with casual sexual partners: the percentage of men practicing unprotected anogenital intercourse with casual partners increased significantly, from 13.1% in 1990 to 24.0% in 1991 (McNemar test, $\chi^2 = 32.50$, $P = .0000$).

Longitudinal analysis showed that more than one third of the 310 men in the panel either consistently reported no-risk behavior (5.8%) or had changed to no-risk behavior (29.7%). Only a small group of men reported consistent high-risk behaviors (8.7%). Nevertheless, most participants placed themselves at risk because of occasional lapses (6.5%), lapses after earlier behavior changes (18.4%), relapses (2.6%), or relapses after initial behavior changes (28.4%).

Discussion

Data presented in this paper demonstrate an increase in sexual risk behaviors and indicators of such behaviors among homosexual and bisexual men in Amsterdam. On the basis of these findings, we conclude that the previously signaled possible rebound in the behavior change process among these men[2] is indeed occurring. Longitudinal data, in particular, showed that occasional lapses as well as relapses, both predominantly after initial behavior change had occurred, are highly prevalent among homosexual participants in the Amsterdam Cohort Study.

Surprisingly, among the generally well-informed participants in the Amsterdam cohort, the prevalence of unprotected anogenital intercourse had mainly increased in casual sexual encounters, situations in which usually little is known about the partner, making it difficult for those concerned to assess the risks involved. The observed stronger increase of gonorrhea among men younger than 30 years of age indicates that unprotected anogenital intercourse is increasing more prominently among younger homosexual men. There are no indications of the occurrence in recent years of changes in the composition of the group of male homosexual and bisexual visitors to municipal sexually transmitted disease clinics or of the male homosexual population in Amsterdam. It is therefore unlikely that demographic changes can account for the observed increase in the number of cases of sexually transmitted diseases.

As has been pointed out in regard to other health-related behaviors, relapse is a rather common phenomenon.[7,8] It should therefore not be surprising to find that homosexual men encounter difficulties in maintaining safer sex behaviors. What can be learned from the literature on other health behaviors is the need for methods that specifically address the issues of maintaining behavior change and preventing relapse. Unfortunately, however, it is not yet understood why homosexual men are again having unprotected anogenital intercourse. Better targeted interventions can be developed if it is possible to identify determinants of sexual behavior relapse. This requires a thorough knowledge of the reasons and factors underlying the renewed engaging in unprotected anogenital intercourse of some homosexual men. New interventions that specifically address these issues of relapse and maintenance of behavior change, especially among younger homosexual men and with casual sexual partners, are urgently needed. □

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